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History, biology, management and hunting of——

THE WILD TURKEY

Our All-American Bird

By Gerald A. Wunz

PGC Wildlife Biologist

THE WILD TURKEY, our biggest game bird, is strictly all-American. *Meleagris gallopavo*, as he's known to scientists, was found in six similar varieties in the vast area from Wisconsin to Arizona, Maine to Florida, and southern Ontario to central Mexico, but nowhere else in the world.

Pennsylvania's turkeys belong to the eastern variety, *Meleagris gallopavo silvestris*, which originally ranged over most of the eastern half of our nation, and which has been noted as the wildest of the six subspecies of wild turkeys. These subspecies differ not only in temperament but also in color and physiology; each evolved to suit its own particular environment. Turkeys in the darkened forests of the East (*silvestris* means "of the forest") are darker-plumaged and able to withstand a more humid climate than western varieties living in a pale and arid habitat.

One of the two subspecies in Mexico was domesticated by the Aztecs centuries ago and taken back to Europe by the Spanish Conquistadores. Thus, there was no need for the American colonists to try to tame the turkey they found here—a fortunate circumstance which allowed the eastern race to remain wild.

Ben Franklin thought so highly of the turkey that he suggested it as our national emblem, but the now-endangered eagle won. The turkey was once endangered, too, and why he isn't today is one of wildlife conservation's greatest success stories.

The wild turkey retains the prefix "wild" because he's considered by many hunters to be the wariest of all our game. His compact, computer-like brain is quick to sort out images perceived by fantastic eyes. If he sees a deer or bear, or even a fox, he may ignore it. But if he sees something walk on its hind legs, he flees on 25-mph legs or 50-mph wings that amazingly pass their five-foot spread through a tangle of treetops. Persecution by man has made him even wilder than his "naive" forebears.

Through history, the wild turkey

withstood the elements, animal predators and even the primitive hunting tools of the Indians, but couldn't stand the inroads of the most efficient predators of all, the settlers from Europe. The turkey's tasty meat and large size made it worth the shot and powder required to put it on the hunter's own table or to sell on the market. Wary as turkeys had become, they were no match for the year-round efforts of market hunters with their pen traps, bait and shot. But despite their efficiency, market hunters couldn't have eliminated the turkey over most of its original range without the systematic destruction of vast areas of its forest home by logging and farming.

In Pennsylvania, turkeys were forced from their best habitat in the lowlands of the southern half of the state to their last retreat in the southcentral mountains. The destruction of virgin forests, however, wasn't all bad for the turkey; massive clearcutting in the northcentral Allegheny Plateau region and the fires and excessive deer browsing that followed were setting the stage for an entirely new type of forest there. The "Black Forest" of pine and hemlock, where no turkeys lived historically, was being replaced by a new deciduous broad-leafed forest of northern hardwoods such as beech, birch, maple, cherry, ash and red oak.

WILDLIFE BIOLOGIST Arnie Hayden uses directional antenna to pick up signal from transmitter-equipped turkey—one method of locating these birds in Pennsylvania's forests.

Meanwhile, turkey populations in the southcentral mountains increased under the protection of refuges, concerned citizens, and a dedicated corps of state game protectors. Then turkeys began to spread northward. Finding the new northern hardwood forests to their liking, the birds responded with fantastic reproduction which increased their rate of spread through these continuous forests. By 1950, they occupied most of northcentral Pennsylvania. Turkeys continue to move into new range, but the rate has been slowed where the forest is broken by cities and large farming areas. Today, turkeys occupy more than 15,000 square miles, or three-fourths of the range available in the state. Nearly half of the state is considered habitable by turkeys.

Pennsylvania's turkey restoration is a lesson in conservation and ecology, an example of man working against and finally with nature. First, turkeys became nearly extinct because of man's greed and thoughtlessness, but then man turned and worked to save those left. The turkey population began to increase. Man also ravaged turkey habitat, but in time learned to protect the regrowth from fire and wasteful cutting. The turkey again responded by filling the new habitat that man and nature had created in northcentral Pennsylvania.

Needed: Basic Research

After turkeys were restored, the Game Commission's job still wasn't finished. If the surplus of turkeys were to be harvested safely, the Commission first had to know the amount of annual reproduction of this renewable resource. The Commission also needed to know how the habitat could be improved to produce more birds, because our human population was increasing and competing with turkeys for living space.

Biologists assigned to do this research soon found that much remained to be learned about this elusive crea-

ture. Beyond the basic observations that toms gobbled in the spring, had harems of several hens, and lived in the forest most of the time, not much was really known of the turkey's life history and specific habitat requirements. Fortunately, the turkey had such appeal that many other Game Commission people throughout turkey range voluntarily pitched in to help the researchers in their studies.

First, folklore had to be separated from fact. For example, many hunters thought that old gobblers traveled with each flock of hens and young turkeys as a sort of guardian patriarch. Actually, the old gobbler couldn't care less about the welfare of the flock. Except during the spring mating period, he's perfectly content to stay in a small flock of old gobblers. If you happen to see one consorting with hens and young at any other time, it is most likely to be a chance meeting or at least a temporary arrangement.

During early spring, it's a different story; then the polygamous gobbler can be very friendly to his harem. Early each morning his gobbling beckons them to watch his pompous strutting, tail erect and fanned, wingtips dragging the ground, head and neck showing blue, white and vivid scarlet.

Nesting and Brooding

After mating, the researchers found, hens selected nesting sites in the forest (rarely in fields), usually in good cover of laurel or the brushy top of a downed tree, but sometimes in the open woods at the base of a large tree. Hens weren't fussy about constructing a nest (they just lay about a dozen eggs in a leafy depression on the forest floor), nor did they seem particular about the type of cover in which they nested. Thus there seemed to be no need to manage for nesting sites; usually enough cover occurred naturally or from timber cutting.

A lot can happen in the 28 days it takes the hen to incubate the eggs. A flood, a late spring snowstorm or disturbance by man or predators can destroy the eggs or sometimes cause the hen to desert the nest. But if all goes well, the peak of hatch for most turkey broods is usually in late May and early June—about the same time fawn deer are being born.

TURKEYS SPEND every night roosting in trees – even poults, which can fly when only two weeks old. This lessens the danger from ground predators.

If the hatch occurs much earlier than this, there is always the danger that cold rains will follow. Wild turkey poults, however, are not as susceptible to chilling as their domestic cousins which originated in the warm, dry climate of Mexico. Our wild turkey poults can withstand a prolonged period of rain if the temperatures are normal or above. After all, our wild birds evolved in Pennsylvania's cool, wet climate and they'd never have survived this long if they couldn't take it. Even under the worst conditions, wild turkey reproduction is unlikely to be a complete failure because all hens don't nest at the same time, and some whose nests were destroyed may renest later in the summer. Hens which have lost their broods, however, have not been known to attempt a second nest.

The hen doesn't linger at the nest site after her young are dry and rested from the strain of pecking their way out of their imprisoning eggshells. A day or two after hatching, the precocious poults may already be following the hen half a mile from the nest.

A turkey hen with little poults to care for is just about the sharpest creature in the woods. She has to be, because this is when her young are most vulnerable to a winged predator or a fox. Predators catch a few, but they catch many more mice and chipmunks, which compete with turkeys for food. Predation (except by human poachers) has not been a serious threat to turkey populations anywhere in their American range. Fortunately for the poults, they can fly when only two weeks old, and after this the danger from ground predators lessens. From this age on they spend every night roosting in trees.

Preferred Habitat

Before tiny radio transmitters were developed to strap on a bird's back, locating a turkey hen with a young brood was like finding the proverbial needle in a haystack—particularly when all habitat types had to be searched uniformly on foot to eliminate bias in determining the turkey's preferences. Early in these searches, biologists noted a definite preference by hens and their broods for forest clearings, glades or orchard-like savannahs in which the ground was covered with grass or other green plants. Usually a source of water was nearby. The young poults fed on the green vegetation and, even more, on the abundant high-protein insect populations found in this type of vegetation.

To confuse the matter, some hens also were able to raise large and healthy-appearing broods in the forest where this grassy vegetation and associated insects were scarce, but where certain kinds of brushy cover (especially overhead cover) were present. Consequently, research is now underway to determine if grassy clearings with lots of insects are necessary. If they are essential, creating small clearings in monotonous areas of solid forest canopy could be an effective and practical way to increase turkey populations.

While researchers were finding out where the broods were being raised, they also tried to catch poults for marking, which would give a life record of each bird almost from the time it hatched. But catching these precocious little ones proved to be no easy task. The ever-watchful hen had to be sighted before she could conceal herself and her chicks, then the researcher had to be in good running form for the 50-yard dash needed to chase the hen away before all of the poults could scatter, hide, and freeze in response to her alarm call. If lucky, the poult-napper caught one or two. Occasionally, a chick's distress cries triggered threatening charges and even attacks by the hen. More often than not, however, she feigned injury to divert the molester's attention long enough for all poults to hide.

GOBBLERS LIKE TO DO THEIR spring courting of hens in forest clearings.

Poults are so well camouflaged that when they remain motionless in grass or leaves, finding one is unlikely. Meanwhile, the hen sits in a nearby tree and keeps up a nearly constant chatter which translates into, "Stay hid, kids!" This hide-and-freeze behavior is a survival trait passed from parent through egg to poult. But essential as inheritable wildness is to survival, the hen must teach her poults even more tricks to get by in their sometimes hostile environment. It's amazing that after the ordeal of nesting and the responsibility of raising poults to maturity, the survival rate of hens is still greater than that of toms.

Travels for Food

As the poults grow larger, they begin to range farther and their diets constantly change according to the food available. Late in summer, broods continue to wander, mostly at the edge of forests and clearings where they feed on ripening grass and weed seeds, cultivated grains, fruits, berries and mushrooms. As leaves turn autumn colors, the flock ventures farther into the woods to eat the seeds and nuts of shrubs and trees such as oak, beech, cherry, ash, dogwood, witch hazel, ironwood and many others. If there's a poor mast crop, they add fat for the winter on less attractive fare such as the ever-present root tubers of spring beauty and other woodland flowers, on the cones of ground pine, seeds of grass and weeds, or on insect larvae from the forest duff.

The poults grow quickly. By November, young hens weigh 6–8 pounds and toms 10–13 pounds. After this initial spurt, growth slows. During the second year, hens reach their maximum weight of 9–10 pounds and gobblers 18–20 pounds. Turkey weights also vary by seasons. Surprisingly, birds weigh least in summer, the season of plenty. Even after a hard winter, gobblers are heaviest in spring when they accumulate a thick layer of gelatinous fat around their crops—called the breast sponge—which serves as a nutritional reserve when they are more intent on mating than feeding.

Surviving Winter

When winter comes, the birds' behavior changes. Young toms split from sisters and mothers and form bachelor flocks of their own or try to join small groups of older gobblers. A pecking order develops, and the dominant bird in both tom and hen flocks assumes command. The tendency for turkeys at this time to form flocks of usually less than 10 birds is undoubtedly necessary for them to survive on the limited food available. If these turkeys are artificially fed or natural food is abundant in certain areas, they sometimes form flocks of up to 50 birds.

During the fall, turkeys may travel over several thousand acres. A Mifflin County flock separated into two groups which in one week moved 50 miles apart. In contrast to this wide-ranging habit, accumulating snow of winter may restrict the birds' mobility to as little as 10 percent of the available range.

Turkeys also respond to a reduced food supply and opportunity to feed, cutting activity to conserve energy and body weight. They may shelter in evergreen roost trees for an entire week during a storm period. They will stay even longer if deep powder snow persists, because they can't walk in it. Experiments have shown that without any food at all, turkeys can live for two weeks, lose 40 percent of their body weight, then recover and even gain weight when restored to only half rations. But eventually, after a long pe-

HENS USUALLY select nesting sites in the forest. They prefer good cover such as laurel or the brushy top of a downed tree, but sometimes use more open places.

GOBBLERS strut for hens, left. Only the dominant males do the mating. Above, a hen and her brood parade across an unusually open area, as if showing off for photographer.

riod of inactivity on the roost, time and cold will take their toll of fat and tissue reserves until the birds fall from exhaustion.

Fortunately, winters this severe are the exception in Pennsylvania. When they do occur turkey losses are largely confined to the broad, high plateaus of northcentral Pennsylvania, where the climate is most severe. When snows begin to deepen, however, most turkeys move off the plateaus and mountaintops to spend the winter on the steep south-facing hillsides and in the valley bottoms. Here snow is not so deep and is less persistent, and spring seeps remain open.

The big birds also find shelter here from cold winds. During most of the year, turkeys roost in any hardwood tree where night overtakes them, but on cold winter nights they prefer the shelter of pines and hemlocks. Besides, the snow is shallower and usually firmer under the evergreens, so the birds can walk and feed.

Turkeys have been described as omnivorous opportunists that will eat nearly anything. Winter especially is no time to be picky. Turkeys will eat salamanders and algae from spring seeps, dry grass from a steep bank, ferns from the side of a rock and will even pick buds like a grouse from beech brush. Starvation is unlikely so long as they have firm footing in the snow, regardless of its depth. Surprisingly, they don't seem particularly interested in grain provided in feeders except during the most severe weather and deepest snows. They prefer foraging on things like sensitive fern spore heads, which stick up out of the snow on two-foot-long stalks in seeps and swamps. This and other foods were once thought to be starvation diets, but analysis showed many were more nutritious than corn.

It's an inescapable fact that some turkeys die during severe winters in northern Pennsylvania. This is nature's way of culling the weak, which in the long run is good for the welfare of the turkey population. Besides, even if we wanted to prevent this, no practical way has yet been found to do so. Researchers studying this problem in McKean County found that some turkeys starved although corn-filled feeders were available nearby. Even if flocks in trouble can be located, they are reluctant to fly down into fluffy snow to feed on grain hauled to them. But somehow, enough survive the severest winters. They actually seem stimulated by their hardship to reproduce more of their kind the following spring.

Changing Habitat

We have learned about turkeys' habitat preferences by observing their habits year-round, but their specific requirements must also be known if the generations of hunters and naturalists that follow us are to continue enjoying the sight of this grand bird. As a result,

most of Pennsylvania's turkey research effort is now being directed toward habitat improvement to determine ways to produce more birds on a given area. This type of research is difficult; it must be carefully controlled and it takes years before sound management recommendations can be made.

The problem is compounded by the fact that the turkey's environment, like ours, is forever changing. Economics and human attitudes, which control the environment to a large extent, don't stay the same. Neither do forests. They grow up, and in doing so they pass through stages that have different effects on turkeys. How and when they are cut can be critical.

For example, it would usually be detrimental to turkeys if large areas of forest were cut for pulpwood while the trees were still too young to produce fruits and nuts, rather than allowing it to mature and be harvested for lumber. Long-term studies are underway in different forest types to determine which cutting practices are most beneficial to turkeys. The old selective logging method of cutting a mature tree here and there appears best for the moment; however, excessive deer browsing is suppressing the best species of seedlings and sometimes eliminating nearly all forest regeneration and shrub growth. Thus, over the long haul, clear-cutting in large blocks to reduce deer damage and allow sunlight to reach seedlings and sprouts may prove essential to encourage the best food-producing tree and shrub species. After all, perpetuating the forest environment is really basic to all turkey management.

GRADUATE STUDENT Dave Putnam and Wildlife Biologist Arnie Hayden examine vegetation in turkey brood habitat. Data collected in such places is helpful in the study of these great game birds.

It would be impossible for the Game Commission, however, to change the composition of Pennsylvania's forests enough to make them more favorable for turkeys without the help of the forester and logger. Fortunately, the species of greatest commercial value for lumber and veneer are also favored by turkeys, so there is common ground between game managers and timber managers.

Research is also showing ways in which the turkey's forest home can be enhanced with land management practices such as food and cover plantings. But this type of habitat improvement is expensive; to be practical it must be proved essential to the welfare of the turkey population and be done on only a small portion of the turkey's habitat. It differs from forest management, which can involve nearly the entire year-round range and is a byproduct of a commercial operation that pays its own way through timber sales.

Studies in progress for several years have centered on improving food production in spring seeps, encouraging wild grapes and food-producing shrubs, planting evergreens for winter shelter and determining the need for

Management Goals

- To establish self-sustaining flocks on all of the remaining 5,000 or more square miles of unoccupied habitat in Pennsylvania.
- To acquire and save as much habitat as possible.
- To increase carrying capacity of the habitat by food and cover developments.
- To maintain a maximum harvest without harm to the breeding stock.

What Can Hunters Do To Help Turkeys?

1. Report illegal hunting. Greed may hold down turkey populations in some areas of Pennsylvania.
2. Support Game Commission policy to safeguard turkey populations in secondary and marginal ranges by having shorter fall seasons. Don't demand more than the resource can stand.
3. Support the Game Commission's program of trapping and transferring turkeys. This is the only sure way to start new flocks to expand turkey range and spread out hunter pressure. Think how this can help reduce the growing hunting pressure from too many "outsiders" that you have been complaining about.
4. Protect turkey habitat from *thoughtless* commercial exploitation and human encroachments. Turkey habitat needs zoning ordinances, too.
5. Encourage state and federal acquisition of forest and wildlife land. Key habitat needs to be saved for the future while it's still worth saving.
6. Support the Game Commission's antlerless deer harvest program. Without herd control, hungry deer can eliminate many of the best food-producing shrubs and young trees, downgrading habitat for turkeys and other wildlife as well as for the deer themselves.
7. Get involved in a food-producing tree and shrub planting program, especially where these foods are scarce on the turkey's northern winter range.

small forest clearings for good production of turkey poults. One study begun recently concerns increasing variety and food production of our forests by seeding and planting better food-producing trees and shrubs. Another involves establishing plantations of trees and shrubs on which fruit hangs all winter, to try to prevent starvation of turkeys in northern Pennsylvania.

Ways must also be found to protect these habitat improvements from hungry deer, which can literally wipe out an expensive shrub and tree planting. Upgrading deer management to allow more precise control of the herd in overbrowsed parts of counties is the most practical way to save and improve habitat for turkey and other forest game—as well as for deer.

To inventory our turkey populations, various tools have been utilized, from the simple snowshoe used for censusing turkeys in winter to the most sophisticated radio telemetry equipment, which can pinpoint a bird wearing a miniature transmitter in a backpack. This space-age hardware has uncovered secrets of this elusive bird which would have been nearly impossible to learn otherwise, secrets we must know before we can hope to improve the turkey's standard of living. But sometimes these modern labor-saving devices and techniques just don't work the way they are supposed to. Radios have limitations in rugged mountains and during cold weather. Even helicopters, which seemed like a good way to count turkeys during the winter, were a disappointment. Turkeys head for the hemlocks when one of these noisy machines violates their quiet airspace, and even the rotor blast won't drive them from this evergreen cover. It's the same survival instinct to hide and stay put that we first saw when they were poults.

So researchers are back on primitive snowshoes, censusing turkeys from their tracks. One thing for sure, wading miles of soft snow each day on snowshoes is great for keeping in shape. And for censusing turkeys or determining their movements, no one yet has found a more accurate method.

Applying Management

We have already learned some things that can be done to improve the

turkey's habitat, and the Game Commission's land managers and foresters are starting to apply them to more than a million acres of Game Lands. Turkeys and other wildlife are also getting greater consideration by foresters managing the 2½ million acres of state and national forest lands in Pennsylvania. Thus, the future of the wild turkey may be relatively secure for our time. But what about the future? Will there be a wild turkey legacy for our children's children if our increasing human population continues to usurp the turkey's living space?

The Game Commission has already researched this possibility by observing turkeys stocked in several small range units near urban areas. Surprisingly, the results changed the stereotyped image of the turkey as a semi-wilderness species to one of greater tolerance for people and of smaller ranges than had been thought possible. Although this gives hope that the flocks may be saved for perpetuity, still there is a limit to encroachment by people; we must assure that the wild turkey's living space, the forest, is guarded from thoughtless exploitation.

This discovery of compatibility with man may also mean that Pennsylvania's turkey range could be expanded an additional 5,000 square miles by stocking habitat formerly considered marginal. Although it appears logical that tamer birds originating from game farms should be better equipped to survive in forests used intensively by people, the opposite has proved true.

Stocking New Range

The conclusion that wildness is the key to the turkey's survival, whatever its environment, wasn't reached overnight. It took a 16-year period, during which the Game Commission thoroughly researched the relative merits of game farm and wild-trapped stock for establishing turkeys in unoccupied range. The transferred wild stock proved far superior. Thus, trapping turkeys from flocks too plentiful for their own health, and stocking these surplus birds in habitat where they were absent, eventually became the most effective and practical turkey management method of our time.

It was a difficult procedure at first, as the wary birds were reluctant to enter any of the numerous designs of cage traps. In the end, however, perseverance triumphed in the form of a net shot over the flocks by cannons. The secret all the while had been concealment. The net and cannons could be completely covered with leaves or other material natural to the surroundings. But if a trapper left one bit of detonating wire exposed to the sharp focus of a turkey's eye, it was just as ineffective as any other type trap.

Trapping during the winter was even tougher. Snow is good for camouflage,

TURKEYS CAN SURVIVE EVEN IN the cold mountainous regions of northern Pennsylvania if the snow isn't too deep and fluffy for them to walk in it to feed.

BIOLOGIST John Kriz uses snowshoes to census turkeys, right, and measures snow depth near a spring seep that's been cleared of over-topping tree growth, above.

but it may also freeze the net fast. A bed of hay helps prevent freezeups, but it stands out like a sore thumb on a snow background. The innovation of powerful rockets coupled to a nylon net packed parachute-style in an easily concealed box has solved most of the problems of trapping turkeys during the winter.

Only an average of 100 turkeys trapped annually are transferred to new range. Others, trapped on research areas in Tioga and Mifflin counties, are immediately released at the same place after being tagged with numbered and colored markers for future identification in various studies. A few are equipped with miniature radio transmitter backpacks.

Despite frustrations caused by uncooperative turkeys and the all-day waits in blinds, hot and bug-filled in summer and frigid in winter, trappers secretly hope that all the problems of trapping turkeys won't be solved. It's the difficulty and unpredictability that makes trapping our smartest bird almost as fascinating as hunting him.

Fall Hunting

As turkeys spread across the state, so has interest in hunting them. Fortunately, Pennsylvania has a large turkey population, numbering up to 100,000 birds in the best years, that can allow a fall hunt in which hens as well as toms are legal game. Besides the exhilarating experience of hunting this challenging species during autumn, many of us also are motivated by the thought of how traditional and how tasty a wild turkey would be for Thanksgiving.

Finding one of these 100,000 turkeys to grace your table, however, can be another matter. In the first place, they are spread over more than 15,000 square miles of range, seldom exceeding a density of 10 birds per square mile. Second, they bunch up in flocks which further reduces your chances of encountering one.

Turkeys do have one revealing trait: they scratch to expose their food. This can reveal their approximate location to an alert hunter. The best place to look for scratchings during the fall is where the food is, often up high on the mountain sides or tops, particularly on the points of ridges. Once you find fresh scratching, concentrate your hunting in that area. Chances are good the flock is still nearby.

The object in fall hunting is to scatter the flock, which is usually composed of hens and their full-grown young. Then the hunter takes advantage of their gregarious nature by calling one back to him. It's possible that another hunter has already scattered the birds, so it

TURKEY, left, was caught in net fired by cannon trap, the usual way of capturing wild birds. Above, Land Manager Ivan Dodd prepares clearing for planting.

pays to pause often to call while you are hunting for the flock. But always pick a good hiding spot before calling. It's a hopeless feeling to be caught in the open when a turkey comes running in.

Safety

Calling turkeys can be hazardous if you are not wearing some fluorescent orange at the same time. During the fall season, just knowing it is legal for other hunters to carry rifles can take away much of the pleasure in calling to turkeys. So consider wearing orange-background camouflage clothing if you still feel you must blend in somewhat with your background. If you are a rifle hunter, try hunting with a shotgun. You'll find it is much more fun when you have to call the turkeys in close.

Regardless of the type of gun used, too many turkeys are crippled by hunters shooting at ranges farther than they can reasonably expect to accurately place a bullet or enough shot in a vulnerable spot. The shotgunner should use medium-size shot, never larger than No. 4, to get a dense pattern where it counts—in the bird's head and neck. Larger shot may carry farther, but is more likely to wound turkeys, and possibly other hunters.

Don't try to sneak up on a calling "turkey." It could be another hunter who thinks you are a turkey, too. Above all, be absolutely sure that your target is a turkey before you shoot. Just think of the consequences—a lifetime of anguish and regret—if you shoot a fellow hunter. No turkey is worth that chance.

Spring Hunting

In May of 1968, a new sport—spring gobbler hunting—came to Pennsylvania. Spring is now the favored season for many hunters because it's that lovely time of the year when the old gobblers are responsive to imitations of the plaintive yelps of the hen. Relatively few old gobblers were harvested during the fall seasons and many of these were taken accidentally, rather than by the sporting method of calling. The spring season changed that.

It's a different ball game at this time of year. You must be where the turkeys are at the first light of day to listen for a blabbermouth gobbler who rarely said anything last fall. Once you pinpoint his location, try to sneak within 200 yards, but not too close, because his eyes are just as sharp now as in the fall. Find a good hiding place—not too brushy—where he can't see your position until he's within 40 yards. If he doesn't have a girlfriend, he may respond to your hen yelp. If a real hen is nearby, he may answer your call, but don't expect him to come. This is when it pays to know a few other calls, such as clucks and whines. And if all others fail, try the gobble. Sometimes he just can't stand the competition from another gobbler, any more than you can from another hunter.

During the spring season, just two hunters after the same gobbling bird can make a crowd. So avoid interference by hunting out-of-the-way

BIOLOGIST JERRY WUNZ, who authored this article, proves he knows the ultimate goal of turkey management. Right, his son Eric approaches a big gobbler he called in and bagged.

places. They're worth searching out.

Don't worry about how good your call sounds, because turkeys don't. It takes a way-off-key note to spook a gobbler. But don't expect him to come running to a call as sometimes happens in the fall, no matter how good it sounds. His approach is slow and very deliberate, sometimes without a sound. If he doesn't gobble, it could be a hen, so be careful not to shoot the wrong kind. Hens' heads are gray colored, gobblers are red, white and blue—remember the all-American bird! And to be absolutely sure before you shoot, look for that beard that makes it legal.

Controlling Harvest

It's better for the flock if old gobblers like this are harvested. The hens have been mated and are laying eggs or nesting during our spring season. From this point on the gobblers are only excess baggage, competing with the hens and the coming generation for food and living space. In some states with limited turkey populations and range, a spring gobbler season is the only type of hunting that could be safely allowed.

Even in Pennsylvania, excessive mortality of hens may occur in some areas during a fall season, especially during periods of tracking snows when harvests and crippling loss are highest. This is why it is necessary to have shorter hunting seasons in more heavily hunted sections of the state where the range is accessible. In response, turkey populations have increased remarkably where residual wild stock persisted. To protect turkeys for the future, additional delineation of turkey harvest units along ecological zone boundaries is essential. Further reduction in season length may be required in secondary range if hunting pressure increases. And if we are to establish turkeys in third-class range near urban areas, it may be necessary to ban fall hunting there altogether and allow only spring hunting for gobblers.

Human attitudes, like the turkey's environment, are also subject to change. More and more people, besides hunters, are intrigued by turkeys and other wildlife, and their interests must be considered. But they should likewise remember that it was the hunter who single-handedly paid the way to save and perpetuate the wild turkey for the enjoyment of all our citizens. The eagle has never been hunted for sport, but he's endangered. That's something to think about.